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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/815,401
Filing Date: March 31, 2004
Appellant(s): RAVERDY ET AL.

Thinh V. Nguyen
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/11/2009 appealing from the Office action mailed 6/12/2009.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

2004/0174829	Ayyagari	02-2004
2004/0018839	Andric et al.	06-2003
2005/0073979	Barber et al.	05-2003
2005/0192037	Nanda et al.	01-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

1. Claims 25-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

2. Claim 25 states "machine-accessible storage medium" which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

To further clarify, since, "processor readable or accessible medium" or "machine readable or accessible medium" may include any medium that can transmit, or transfer information, and the processor readable or machine accessible medium is a radio frequency (RF) link, it is unclear as to how a machine can store data in a RF link (a non-tangible medium), access the data to perform the operations of claim 25. Therefore, claim 25 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim Rejections - 35 USC § 103

3. Claims 1, 3-8, 10-13, 15-20, 22, 24-25, 27-32, 34 and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari (US20040174829) in view of Andric et al. (US PAT PUB 2004/0018839, hereinafter Andric).

Regarding claims 1, Ayyagari discloses a centralized network organization and topology discovery in ad-hoc network with central controller (see paragraph 5) comprising: a frame module (see paragraph 25 central coordinator(Cco)) to process a frame containing information regarding a local node in a first network (see paragraph 64 Device Class and Activity Indicator), the information including discovery information (Figure 5, Device Class and paragraph 0120) and network state information (see paragraph 64 network state information is not further specified and therefore the term is broadly interpreted and figure 5 Activity indicator which indicates how busy a device is corresponds to network state information. In paragraph 0064, Ayyagari further states Activity Indicator is an optional parameter indicating how busy a device is, in terms of its duty cycle. If a device is not transmitting or receiving data (i.e. if the network connected to the device is transmitting or receiving data) this value is 0), the discovery information being represented in a common description (see paragraph 55 line 1 - 9 and figure 5 and figure 6); • an information module (see paragraph 75-79, topology table) coupled to the frame module to manage the information (see paragraph 75-79 where CCo maintains a topology table); and • a communication module (implicilty CCo comprises a communication module for communicating with other nodes) coupled to the frame module and the information module to manage communication between the local node

and a remote node (see paragraph 21 and 75-79 where CCo maintains a topology table of the discovered node lists and topology is being update in paragraph 84, and paragraph 88 where node communicate with CCo is being specified with beacon message) in a second network using the information (see paragraph 21).

Ayyagari does not explicitly teach a communication module and state information including at least one of network configuration, network status and network history.

Andric in the same or similar field of endeavor teaches a communication module (paragraph 0212 and Figure 75) and state information including at least one of network configuration, network status and network history (paragraph 0128).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate in Ayyagari's system/method the communication module and state information including at least one of network configuration, network status and network history as suggested by Andric. The motivation is that (as suggested by Andric, paragraph 0127) such method enables a node to keep up-to-date route information for future routing; thus making the network efficient and reliable. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Regarding claim 3, Ayyagari teaches the frame receiver forwards the received remote frame to the communication module if the received remote frame is related to the network communication (see paragraph 88 beacon message).

Regarding claim 4, Ayyagari teaches the frame receiver forwards (see paragraph 89 line 7-10) the received remote frame to the information module of the local node, to another local node in the first network, or to another remote node if the received remote frame is related to information exchange and meets an acceptance condition (see paragraph 89 admission in the network).

Regarding claim 5, Ayyagari teaches the acceptance condition is based on a forwarding number and propagation parameters (see paragraph 79) including a propagation list (see paragraph 76) and a propagation type (see paragraph 89 slot number of a contention channel), the forwarding number and the propagation type being contained in the frame (see paragraph 89 line 1-5 and paragraph 91 line 3 T_d iscovery_interval).

Regarding claim 6, Ayyagari teaches the information module comprises: • a collector to collect the information (see paragraph 113); • a translator coupled to the collector to translate the discovery information into the common description (see figure 6 and paragraph 66 line 10-11); • a node selector coupled to the collector to determine if the local node participates in the communication based on the network state information of the local node and other network state information from another local node in the first network (see paragraph 70 a new device that has been selected as the CCo); and • a synchronizer to synchronize the collected information with other information from other local nodes in the first network (see paragraph 55 and 84 update its discovered node list).

Regarding claim 7, Ayyagari teaches the information module further comprises: • an information table to store entries regarding information extracted from a received remote frame (see paragraph 76 topology table); and • an information table updater to update the entries (see paragraph 84).

Regarding claim 8, Ayyagari teaches the communication module comprises: • a usage evaluator to evaluate network usage to determine relative location of the second network based on an interference list from the network state information (see paragraph 118 line 3-6 and paragraph 147); • a channel migration evaluator to evaluate a channel allocation layout (see paragraph 118 line 6-11 quality indicator); • a channel change controller to control a channel change based in the channel allocation layout (see paragraph 118 line 8-10); and • a channel changer to change channel of the local node according to a wireless mode used by the node (see paragraph 118 line 8-10 and paragraph 121 line 1).

Regarding claim 10, Ayyagari teaches the discovery information includes information on at least node device (see figure 1 ref20 ref 30), node service (see paragraph 46), and user (see figure 1 ref20 ref 30).

Regarding claim 12, Ayyagari teaches the interference list includes at least a network from which the local node receives a beacon or directly receives a remote frame from the remote node (see paragraph 46).

Regarding claims 13, 15-20, 22 and 24, Ayyagari and Andric disclose all the limitations as discussed in the rejection of apparatus claims 1,3-8, and 10-12 and are therefore method claims 13, 15-20, 22 and 24 are rejected using the same rationales.

Regarding claims 25, 27-32, 34 and 36, Ayyagari teaches a self-organizing ad-hoc communication networks (see paragraph 4 it is inherent devices (nodes) are computerized and is functioned by a set data) and in view of Andric disclose all the limitations as discussed in the rejection of apparatus claims 1,3-8, and 10-12 and are therefore article or manufacture claims 25, 27-32, 34 and36 are rejected using the same rationales.

Regarding claims 37-40, Ayyagari in view of Andric disclose all the limitations as discussed in the rejection of apparatus claims 1-2, 6, and 8 and are therefore apparatus claims 37-40 are rejected using the same rationales.

9. Claims 2, 9, 14, 21, 26, and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari and Andric as applied to claims 1, 13, 25 and 37 and further in view of Barber et al. (US20050073979).

Regarding claim 2, Ayyagari teaches the frame module comprises: • a frame builder to build the frame containing the information (see paragraphs 57-60 and it is inherent for message to contains information); • a frame transmitter (see paragraph 58) coupled to the frame builder (see paragraphs 57-60 and it is inherent for message to contains information such as allocation frame number, time slot) to transmit the frame (see paragraph 58 a message transmitted by the CCo) to another local node in the first network or the remote node in the second network (see Ayyagari paragraph 54 the node communicates with the CCo directly or through an intermediary node, and registers in the network); • a frame receiver to receive another frame from another local

node in the first network (see paragraph 48 a discovery msg message has been received) or to receive a remote frame from the remote node (see paragraph 24 and 88-89); and disclose all the subject matter of the claimed invention with the exception of • a frame poller coupled to the frame transmitter to provide a polling frame requesting for information of the remote node.

In the background of Barber et al. the same or similar fields of endeavor teaches the use of polling interaction (see Barber et al. paragraph 12 and figure 12 and paragraph 103 package up traffic between visitor clients).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the polling and packaging of traffic as taught Barber et al. in the discovery in ad-hoc network with central controller of Ayyagari and Andric in order to increase efficiency of the transmission system. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Regarding claim 9, Ayyagari disclose all the subject matter of the claimed invention with the exception of the channel migration evaluator evaluates an alternate layout based on a relationship between interference and channel distance.

Barber et al. from the same or similar fields of endeavor teaches the use of distance between two radio sources is determinable from signal strength (see Barber et al. paragraph 84), and calculated physical positions of each radio and stats about nearby interference (see Barber et al. paragraph 86).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the determining signal strength, and calculating physical positions of each radio and stats about interference as taught by Barber et al. in the ad-hoc network with central controller of Ayyagari and Andric in order to increase efficiency of the transmission system. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

Regarding claims 14, 21, 26, and 33, Ayyagari, Andric and disclose all the limitations as discussed in the rejection of apparatus claims 2 and 9 and are therefore apparatus claims 14, 21, 26, and 33 are rejected using the same rationales.

9. Claims 11, 23 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayyagari and Andric as applied to claims 1, 13 and 37 and further in view of Nanda et al. (US2005/0192037, hereinafter Nanda).

Regarding claim 11, 23 and 35 Ayyagari and Andric teach the network state information as described above.

Ayyagari and Andric do not explicitly teach network state information including an interference list.

Nanda in the same field of endeavor teaches network state information including an interference list (paragraphs 0010, 0013, 0014, 0065, 0071, 0076, 0079 and 0080).

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate in Ayyagari and Andric's system/method the step of network state information including an interference list as suggested by Nanda. The motivation is that such method of providing interference list enables a network to be aware of all of the surrounding topologies and thus, configure various nodes to be operable in a seamless and reliable manner. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

(10) Response to Argument

35 USC 101 Rejection of claims 25-36:

Appellant argues that (page 8, first and second paragraph) *First, Claims 25-36 are Beauregard-type claims which recite an article of manufacture that comprises a machine-accessible storage medium. A claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035; MPEP 2106.01.I. Computer programs are often recited as part of a claim. USPTO personnel should determine whether the computer program is being claimed as part of an otherwise statutory manufacture or machine. In such a case, the claim remains statutory irrespective of the fact that a computer program is included in the claim. MPEP*

2106.01.I (Emphasis added.) Such a Beauregard claim has been determined statutory. In re Nuijten, 500 F.3d 1346 (Fed. Cir., 2007) ("It has been the practice for a number of years that a 'Beauregard Claim' of this nature be considered statutory at the USPTO as a product claim.").

Examiner respectfully disagrees with Appellant's assertion.

Claim 25 states:

> 25. (previously presented) An article of manufacture comprising:
>
> a machine-accessible storage medium including data that, when accessed by a machine, causes the machine to perform operations comprising:

Specification page 25 paragraph [0108] states:

> **"processor readable or accessible medium" or "machine readable or accessible medium" may include any medium that can store, transmit, or transfer information. Examples of the processor readable or machine accessible medium include an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk, a fiber optic medium, a radio frequency (RF) link, etc. The computer data signal may include any signal that can propagate over a transmission medium such as electronic network channels, optical fibers, air, electromagnetic, RF links, etc. The code segments may be downloaded via computer networks such as the Internet, Intranet, etc. The machine accessible medium may be embodied in an article**

According to "INTERIM EXAMINATION INSTRUCTIONS FOR EVALUATING SUBJECT MATTER ELIGIBILITY UNDER 35 USC 101 AUG, 2009",

Non-limiting examples of claims that are not directed to one of the statutory categories:

i. Transitory forms of signal transmission (for example, a propagating electrical or electromagnetic signal *per se*).

ii. A naturally occurring organism.

iii. A human *per se*.

iv. A legal contractual agreement between two parties.

v. A game defined as a set of rules.

vi. A computer program *per se*.

vii. A company.

A claim that covers both statutory and non-statutory embodiments (under the broadest reasonable interpretation of the claim when read in light of the specification and in view of one skilled in the art) embraces subject matter that is not eligible for patent protection and therefore is directed to non-statutory subject matter. Such claims fail the first step and should be rejected under § 101, for at least this reason. For example, a claim to a computer readable medium that can be a compact disc or *a carrier wave* covers a non-statutory embodiment and therefore should be rejected under § 101 as being directed to non-statutory subject matter.

Furthermore, Examiner respectfully disagrees with the Appellant's interpretation of the Examiner's rejection of claims 26-30. Claim 25 recites "An article of Manufacture" and "a machine-accessible storage medium". According to the specification, paragraph 0108 states : "The term hardware (i.e. article or manufacture) generally refers to an element having a physical structure such as electronic, electromagnetic, optical, electro-optical, mechanical, electro-mechanical parts, etc. (Examiner notes: as such, article of manufacture can be an element having a physical structure such as electromagnetic (transitory signal or carrier-wave) parts) The term firmware generally refers to a logical structure, a method, a procedure, a program, a routine, a process, an algorithm, a formula, a function, an expression, etc that is implemented or embodied in a hardware structure (Examiner notes: data embodied in electromagnetic (transitory signal or carrier-wave) parts?) (e.g., flash memory, ROM, EROM). Examples of firmware may

include microcode, writable control store, microprogrammed structure. The "processor readable or accessible medium" or "machine readable or accessible medium" may include any medium that can store, transmit, or transfer information. Examples of the processor readable or machine accessible medium include an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk, a fiber optic medium, a radio frequency (RF) link, etc. The computer data signal may include any signal that can propagate over a transmission medium such as electronic network channels, optical fibers, air, electromagnetic, RF links, etc.

Therefore, in light of the specification, “An article of Manufacture” and “a machine-accessible storage medium” can be implemented without any tangible hardware medium, i.e. can be implemented electromagnetically as transitory signal or carrier-wave or as a transmission medium such as air, RF signals etc. As such, Claims 25-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter (i.e. non-tangible transmission media such as RF, electromagnetic media, air etc). Regarding Claims 25-36, the claims are directed to a non-tangible “machine-accessible storage medium" (descriptive material) per se as recited and is considered non-statutory subject matter. (See MPEP 2I06.IV.B.1(a)). Machine-readable instructions stored in data structures, program modules, or other data in a modulated data signal such as a carrier wave, RF, air or other transport mechanism are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer. See, e.g., Warmerdam, 33 F.3d at l36 l , 31

USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed Machine-readable instructions, data structures, program modules, or other data in a modulated data signal such as a carrier wave or other transport mechanism do not define any structural and functional interrelationships between the Machine-readable instructions, data structures, program modules, or other data in a modulated data signal such as a carrier wave or other transport mechanism and other claimed aspects of the invention, which permit the Machine-readable instructions, data structures, program modules, or other data in a modulated data signal such as a carrier wave or other transport mechanism's functionality to be realized.

Therefore, claim 25, in light of the specification, discloses a non-tangible article of manufacture as a whole.

35 USC 112 first paragraph Rejection of claims 25-36:

Appellant argues that (page 8 paragraph 3, page 9, paragraphs 1-3) *paragraph [0104] recites, in part, "[t]he program or code segments can be stored in a processor or machine accessible medium or transmitted by a computer data signal embodied in a carrier wave, or a signal modulated by a carrier, over a transmission medium. The "processor readable or accessible medium" or "machine readable or accessible medium" may include any medium that can store, transmit, or transfer information. (Emphasis added.) The description provides alternative embodiments. Appellant does not have to claim all of the alternative embodiments. Claims 25-36 recite a "storage medium". Clearly, one skilled in the art at the time of the invention would understand that a storage medium can store data. Furthermore, claims should be interpreted*

consistently with the specification, which provides content for the proper construction of the claims because it explains the nature of the patentee's invention. See Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243,1250, 48 USPQ 2d (BNA) 1117 (Fed. Cir. 1998). MPEP 2111. The article of manufacture and the machine-accessible storage medium claim language is fully supported in the specification. See, for example, paragraphs [0108] - [0109]. The specification provides that examples of the processor readable or machine accessible medium include an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk, etc. It is well known that these media can store data.

However, Examiner respectfully disagrees with Appellant's assertion. Claim 25 states:

> a machine-accessible storage medium including data that, when accessed by a machine, causes the machine to perform operations comprising:

Specification page 25 paragraph [0108] states:

> **"processor readable or accessible medium" or "machine readable or accessible medium" may include any medium that can store, transmit, or transfer information. Examples of the processor readable or machine accessible medium include an electronic circuit, a semiconductor memory device, a read only memory (ROM), a flash memory, an erasable ROM (EROM), a floppy diskette, a compact disk (CD) ROM, an optical disk, a hard disk, a fiber optic medium, a radio frequency (RF) link, etc. The computer data signal may include any signal that can propagate over a transmission medium such as electronic network channels, optical fibers, air, electromagnetic, RF links, etc. The code segments may be downloaded via computer networks such as the Internet, Intranet, etc. The machine accessible medium may be embodied in an article**

Under the broadest reasonable interpretation of the claim when read in light of the specification and in view of one skilled in the art, it is unclear how a "machine" could access "data" stored in "machine-accessible storage medium" comprising of "carrier-wave or RF or electromagnetic-signal" (as described in the specification) without first converting the said "data" into "electrical format" (such as bits, bytes etc.). Under the broadest reasonable interpretation of the claim when read in light of the specification and in view of one skilled in the art, a "modulated-signal, such as carrier-wave, RF, electromagnetic-signal" is converted into "electrical format" (such as bits, bytes etc.) to be stored in memory, buffer or any kind of tangible storage, prior to a "machine" (such as a processor) can reading them. Therefore, claim 25 contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1, 3-8, and 10-13, 15-20, and 22, 24-25, 27-32, 34, and 36-40 Are Obvious over Avyagari in view of Andric

Appellant argues that (page 11 paragraph 3) *Ayyagari and Andric, taken alone or in any combination, do not disclose or render obvious, at least one of: (1) a frame module to process a frame containing information regarding a local node in a first network, the information including discovery information and network state information, the discovery information being represented in a common description, the network state information including at least one of network configuration, network status, and network history; (2) an information module coupled to the frame module to manage the information; (3) a communication module coupled to the frame module and the information module to manage communication between the local node and a remote node in a second network using the information*.

However, Examiner respectfully disagrees with Appellant's assertion. The cited prior art do indeed teach the cited limitations. Specifically, Ayyagari discloses a centralized network organization and topology discovery in ad-hoc network with central controller (see paragraph 5) comprising: a frame module (see paragraph 25 central coordinator(Cco)) to process a frame containing information regarding a local node in a first network (see paragraph 64 Device Class and Activity Indicator), the information including discovery information (Figure 5, Device Class and paragraph 0120, based on the class of each of the nodes in N, the node in N with the best capabilities or the highest class may be chosen as the CCo. Some nodes in the network may be unable to function as the CCo. The CCo must maintain Device Class or Device Capabilities

information obtained at the time of association. This data must enable the CCo to determine if a device can or cannot function (i.e. manage) in the role of a CCo) and network state information (see paragraph 64 network state information is not further specified and therefore the term is broadly interpreted and figure 5 Activity indicator which indicates how busy a device is corresponds to network state information. In paragraph 0064, Ayyagari further states Activity Indicator is an optional parameter indicating how busy a device is, in terms of its duty cycle. If a device is not transmitting or receiving data (i.e. if the network connected to the device is transmitting or receiving data) this value is 0), the discovery information being represented in a common description (see paragraph 55 line 1 - 9 and figure 5 and figure 6, Device Class); • an information module (see paragraph 75-79, topology table) coupled to the frame module to manage the information (see paragraph 75-79 where CCo maintains a topology table); and • a communication module (implicitly CCo comprises a communication module for communicating with other nodes) coupled to the frame module and the information module to manage communication between the local node and a remote node (see paragraph 21 and 75-79 where CCo maintains a topology table of the discovered node lists and topology is being update in paragraph 84, and paragraph 88 where node communicate with CCo is being specified with beacon message) in a second network using the information (see paragraph 21, the CNOA algorithm describes the following functions: initial network establishment when no network exists, processes for devices joining and leaving the network, devices discovering or learning the topology of the network, identification of "hidden nodes", identification of proxy

controllers to service hidden nodes, and selection of an optimal Central Coordinator from among all devices in the network. This algorithm defines procedures that enable hidden nodes to join the network. Topology discovery is the process by which individual nodes in a network (e.g., hosts, bridges, routers, etc.) learn the configuration of the network and the connectivity between any two individual nodes. This is important for network management, and for efficient routing and resource management. In the case of ad-hoc networks, the processes of discovery and network organization (how nodes (i.e. interpreted as remote nodes) organize themselves into clusters or sub-nets (i.e. interpreted as second network) with designated subnet managers or controllers) are fundamental to the efficient operation of such networks). Ayyagari does not explicitly teach a communication module and state information including at least one of network configuration, network status and network history. Andric in the same or similar field of endeavor teaches a communication module (paragraph 0212 and Figure 75, element 400) and state information including at least one of network configuration (paragraph 0128, parent cluster, child/lower clusters and the border nodes' NID), network status and network history (paragraph 0128, determines that a different parent cluster is linked to the cluster).

Appellant argues that (page 11 last paragraph) *Ayyagari merely discloses the START_DISCOVERY_MSG transmitted by the CCo to indicate the beginning of a DISCOVERY period (Ayyagari, par. [0060]) and the CCO_NETCONFIG_MSG transmitted by a new device that has been selected as the new CCo or by the current CCo itself after network organization is completed (Ayyagari, par. [0070]), not a frame*

module to process a frame containing information regarding a local node in a first network, the information including discovery information and network state information. As discussed above, the information in the DISCOVERY_MSG and the CCO_NETCONFIG_MSG are not contained within a single frame. Thus, there is no teaching of "a frame containing information.., including discovery information and network state information."

However, Examiner respectfully disagrees with Appellant's assertion. Ayyagari does indeed teach the cited limitations. Specifically, as described above, Ayyagari discloses a centralized network organization and topology discovery in ad-hoc network with central controller (see paragraph 5) comprising: a frame module (see paragraph 25 central coordinator(Cco)) to process a frame containing information regarding a local node in a first network (see paragraph 64 Device Class and Activity Indicator), the information including discovery information (Figure 5, Device Class and paragraph 0120, based on the class of each of the nodes in N, the node in N with the best capabilities or the highest class may be chosen as the CCo. Some nodes in the network may be unable to function as the CCo. The CCo must maintain Device Class or Device Capabilities information obtained at the time of association. This data must enable the CCo to determine if a device can or cannot function in the role of a CCo) and network state information (see paragraph 64 network state information is not further specified and therefore the term is broadly interpreted and figure 5 Activity indicator which indicates how busy a device is corresponds to network state information. In paragraph 0064, Ayyagari further states Activity Indicator is an optional parameter indicating how

busy a device is, in terms of its duty cycle. If a device is not transmitting or receiving data (i.e. if the network connected to the device is transmitting or receiving data) this value is 0), the discovery information being represented in a common description (see paragraph 55 line 1 - 9 and figure 5 and figure 6, Device Class).

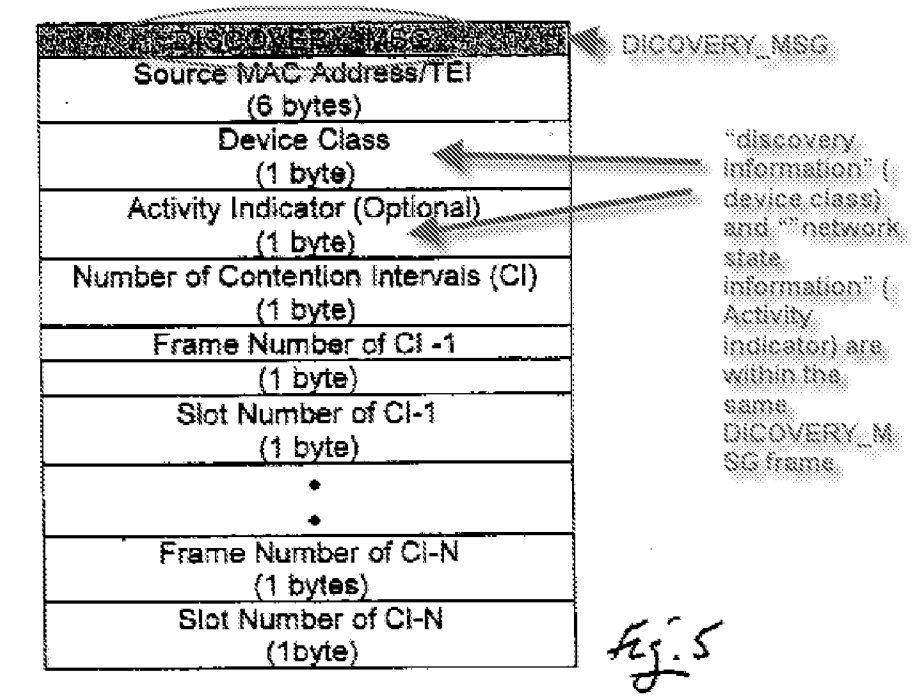


Fig. 5

Clearly, the limitation "discovery information" (device class) and ""network state information" (Activity indicator) are within the same DICOVERY_MSG frame as can be seen from figure 5.

Appellant argues that (page 12 second paragraph) *Ayyagari merely discloses every other node listening to DISCOVER_MSG transmissions and updating its DISCOVERED_NODE_LIST (Ayyagari, par. [0055]) and the topology table of the CCo being a tabulation of the DISCOVERED_NODE_LISTS for all nodes (Ayyagari, par. [0076]), not an information module to manage the information, as recited in claim 1. As*

discussed above, given that the Examiner alleges the network information is contained in the CCO_NETCONFIG_MSG, CCo cannot be the information module since the topology table does not account for the CCO_NETCONFIG_MSG information.

However, Examiner respectfully disagrees with Appellant's assertion. The current claim language states: "an information module…to manage the information"; "the information" being defined as "discovery information" and "network state information"; and "network state information being defined as one of "network configuration", "network status" and "network history". Topology table as shown in figure 10 has "discovery information" (Discovered Node Lists) and "network configuration" (interpreted as Device Class) and/or "network status" (interpreted as Nodes column). Therefore,

- Information Module =: Topology Table for CCo;
- Information =:

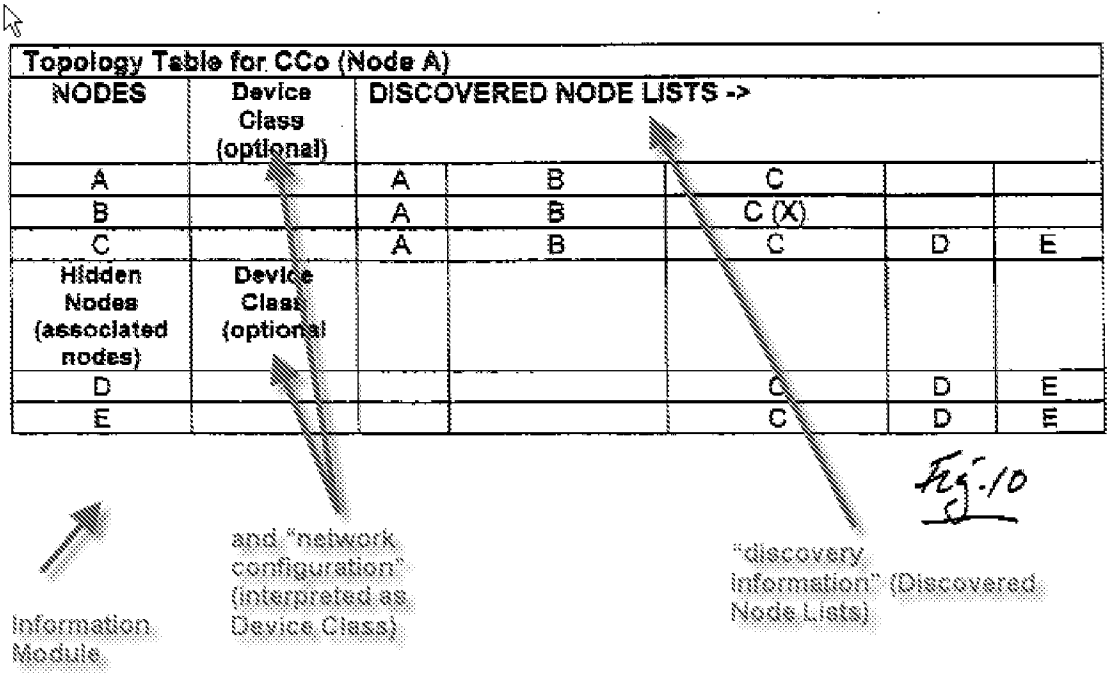
1) discovery information = Discovered Node Lists;

2) network state information = one of

i) "network configuration" (Device Class),

ii) "network status" (Nodes column) and

iii) "network history".



Clearly, Ayyagari does indeed teach an information module (see paragraph 75-79, topology table) coupled to the frame module to manage the information (see paragraph 75-79 where CCo maintains a topology table and information being "discovery information" (Discovered Node Lists) and "network configuration" (interpreted as Device Class) and/or "network status" (interpreted as Nodes column).

Appellant argues that (page 12, paragraph 3) *the Examiner interprets the CCo as the frame module and as the information module (.Final Office Action, pages 5-6, paragraph 7, "see paragraph 25 central coordinator (CCo)" on page 5, and "implicitly CCo comprises a communication module for communicating with other nodes" on page 6). However, the CCo cannot be both frame module and information module because they perform different functions as discussed above*.

Examiner respectfully disagrees with Appellant's assertion. The cited prior art does indeed teach all the elements of the claim. A frame module is the (see paragraph 25) central coordinator(CCo)) while an information module being the (see paragraph 75-79) topology table). Examiner has clearly shown how all the elements and functionality of the claim is interpreted and mapped to various elements and functionality of the prior art. As such, since the cited prior art teaches all the elements of the claim, Appellant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

Appellant argues that (page 12, paragraph 4) *the topology table is merely a tabulation table of the discovered node lists of all nodes that have associated with the network (Ayyagari, paragraph [0076], lines 1-5). Accordingly, it cannot manage the information which includes discovery information and network state information where the network state information includes at least one of network configuration, network status, and network history. A list of discovered nodes does not correspond to the network configuration, status, and history*.

However, Examiner respectfully disagrees with Appellant's assertion. A list of discovered node does indeed correspond to network configuration, status and history For example, determining current number of nodes currently connected (relates to status and history), and configuring resource allocation and reservation for the discovered nodes based on device class are related to network configuration related steps.

Appellant argues that (page 12 last paragraph) *Ayyagari merely discloses viable interconnections between nodes relating to two illustrative organizations, such as interconnection 40 between C and D (Ayyagari, par. [0043], lines 7-10; Fig. 1, ref. 40), not a communication module coupled to the frame module and the information module to manage communication using the information, as recited in claim 1. A viable interconnection is a communication link that may be created between nodes C and D. In contrast, communication module 230 manages communication between the IW node and a remote node in a second IW network and receives the IW information from the information module 220 (See, for example, Specifications, par. [0035]). A communication link is merely a connection to connect two nodes. It does not have the ability to manage the communication between the two node*s.

However, Examiner respectfully disagrees with Appellant's assertion. The current claim language "managing communication" is a broad limitation and in view of the broadest reasonable interpretation of the claim language Ayyagari does indeed teach the cited limitations. Specifically, Ayyagari teaches a frame module (see paragraph 25 central coordinator(Cco)) coupled to an information module (see paragraph 75-79, topology table) and coupled a communication module (implicitly CCo comprises a communication module for communicating with other nodes).

Ayyagari states:

- Paragraph 0027: CCo controls (i.e. manages) the transmission activity of the nodes in the network.

- Paragraph 0054: CCo transmits BEACON message, implying that a CCo has a communication module.
- Paragraph 0116: DISCOVERY_MSG is broadcast by each node as a part of the DISCOVERY process. Since, it is broadcasted, it is received by all nodes including the node which would be designated as a new CCo (implying that CCo has a frame module to process the DISCOVERY_MSG). Once a network has been organized, and the set N determined from the TOPOLOGY_TABLE, each node has to determine the node in N that is best suited to serve in the role of CCo. The criteria for choosing the CCo may be different. Any one or a combination of these criteria may be used in the selection of CCo. The criteria must be agreed to and known by all the nodes participating in the process. Assuming that the above method is used to determine link capacity, the node which can support the best overall throughput, defined either as the maximum of the minimum throughputs on all links to/from that node, or as the sum of throughputs of all links to/from the node, may be chosen as the CCo. The node is selected from the set N.
- Paragraph 0055: CCo maintains resulting TOPOLOGY_TABLE (i.e. information module) during discovery process.
- Paragraph 0092: The CCo schedules (i.e. manages) transmission opportunities (TXOPs) (block 78) for all nodes (i.e. via

TOPOLOGY_TABLE) in the network, including Hidden nodes, to enable them to transmit the DISCOVERY_MSG messages.

In response to Appellant's argument that the references fail to show certain features of Appellant's invention, it is noted that the features upon which Appellant relies (i.e., "*communication module 230 manages communication between the IW node and a remote node in a second IW network and receives the IW information from the information module 220*") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant argues that (page 13 last paragraph) *Andric merely discloses a message receiver 430 receives incoming messages 410 and prepares them for processing by message processor 440 (Andric, paragraph [0212]), not a communication module to manage communication between the local node and a remote node in a second network using the information. The receiver 430 merely receives the incoming messages 410. Receiving messages merely accepts the messages. It does not manage communication between the local node and a remote node. Furthermore, the message processor 440 merely interacts with storage block 470, audio/visual indicator 460, and message router 450 to correctly process incoming messages 410. It does not manage the communication using the information. The storage block 470, or the audio/visual indicator 460, or the message router 450 does not contain the information including discovery information and network state information*.

However, Examiner respectfully disagrees with Appellant's assertion. Ayyagari does not explicitly teach a communication module and state information including at least one of network configuration, network status and network history. Andric in the same or similar field of endeavor teaches a communication module (paragraph 0212 and Figure 75) and state information including at least one of network configuration, network status and network history (paragraph 0128). Therefore, a communication module to manage communication between the local node and a remote node in a second network using the information is taught by Ayyagari, not Andric. Ayyagari teaches *managing the communication using the information containing the information including discovery information and network state information*, not Andric. In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant argues that (page 14 paragraph 2) *Andric merely discloses a network topology update message (Andric, paragraph [0128]), not the network state information including at least one of network configuration, network status, and network history. When a cluster head receives this message, it merely changes the parent cluster as indicated in the message. The network topology update therefore only refers to the parent cluster. It is not related to the network configuration, network status, and network history*.

However, Examiner respectfully disagrees. Andric does indeed teach the cited limitations. Specifcally, Andric in the same or similar field of endeavor teaches a communication module (paragraph 0212 and Figure 75) and state information including at least one of network configuration, network status and network history (paragraph 0128, If a cluster head receives the NETWORK TOPOLOGY UPDATE message and determines that a different parent cluster is linked to the cluster (i.e. satisfies the limitations network configuration (configuration being the information that a different parent cluster is linked to the cluster), network status (status being the information that a different parent cluster is linked to the cluster) and network history (history being the information that a different parent cluster is linked to the cluster as opposed to prior parent cluster)), it changes the parent cluster as indicated in the message (i.e. indicated information in the message satisfies the limitations network configuration, network status and network history).

Claims 2, 9, 14, 21, 26 and 33 Are Obvious over Ayyagari and Andric and further in view of Barber

In regards to claims 2, 9, 14, 21, 26 and 33, Appellant argues (page 15, paragraph 2) that *Ayyagari, Andric and Barber taken alone or in any combination do not disclose or render obvious at least one of elements (1) - (3) as above*.

However, Examiner has clearly shown above that Ayyagari and Andric do indeed teach the cited limitations.

In regards to claims 2, 9, 14, 21, 26 and 33, Appellant argues (page 15, paragraph 2) that *Ayyagari, Andric and Barber taken alone or in any combination do not disclose or render obvious at least one of elements (4) a frame builder to build the frame containing the information; (5) a frame transmitter coupled to the frame builder to transmit the frame to another local node in the first network or the remote node in the second network; (6) a frame poller coupled to the frame transmitter to provide a polling frame requesting for information of the remote node; and (7) a frame receiver to receive another frame from another local node in the first network or to receive a remote frame from the remote node*.

However, Examiner respectfully disagrees with Appellant's assertion. The cited prior art do indeed teach the cited limitations. Specifically, Ayyagari teaches the frame module comprises: • a frame builder to build the frame containing the information (see paragraphs 57-60 and it is inherent for message to contains information); • a frame transmitter (see paragraph 58) coupled to the frame builder (see paragraphs 57-60 and it is inherent for message to contains information such as allocation frame number, time slot) to transmit the frame (see paragraph 58 a message transmitted by the CCo) to another local node in the first network or the remote node in the second network (see Ayyagari paragraph 54 the node communicates with the CCo directly or through an intermediary node, and registers in the network); • a frame receiver to receive another frame from another local node in the first network (see paragraph 48 a discovery msg message has been received) or to receive a remote frame from the remote node (see paragraph 24 and 88-89); and disclose all the subject matter of the claimed invention

with the exception of • a frame poller coupled to the frame transmitter to provide a polling frame requesting for information of the remote node. In the background of Barber et al. the same or similar fields of endeavor teaches the use of polling interaction (see Barber et al. paragraph 12 and figure 12 and paragraph 103 package up traffic between visitor clients). Therefore, Examiner respectfully disagrees with Appellant's assertion (page 15, paragraph 3) that *Ayyagari does not disclose a frame containing information.., including discovery information and network state information, let alone, a frame builder to build the frame, a frame transmitter to transmit the frame, or a frame receiver to receive another frame, as recited in claims 2, 14, and 26*.

Appellant argues that (page 15, paragraph 4) *with respect to the frame transmitter, Ayyagari merely discloses the BEACON_MSG being transmitted by the CCo periodically (Ayyagari, par. [0058]). The BEACON_MSG carries the identity of the transmitting device and may include the START_DISCOVERY_MSG (Ayyagari, par. [0058-0060]). Since the BEACON_MSG does not include the network state information, allegedly the CCO_NETCONFIG_MSG, or the discovery information, allegedly the DISCOVERY_MSG, the BEACON_MSG cannot be the frame transmitted by the frame transmitter. Moreover, the Examiner alleges that the CCo is the frame transmitter (Final Office Action, page 10, line 3). Previously, the Examiner alleged that the CCo was also the frame module and the information module. Each of these modules performs different functions such that they cannot all be the same module*.

However, Examiner respectfully disagrees with Appellant's assertion. Examiner has cited paragraph 0058 to imply the presence of a transmitter in a CCo. However, in addition to BEACON_MSG, CCo also transmits the DISCOVERY_MSG.

- Paragraph 0116: DISCOVERY_MSG is broadcast (implying that CCo has a transmitter) by each node as a part of the DISCOVERY process. (Since, it is broadcasted, it is received by all nodes including the node which would be designated as a new CCo, implying that CCo has a frame module to process the DISCOVERY_MSG). Once a network has been organized, and the set N determined from the TOPOLOGY_TABLE, each node has to determine the node in N that is best suited to serve in the role of CCo. The criteria for choosing the CCo may be different. Any one or a combination of these criteria may be used in the selection of CCo. The criteria must be agreed to and known by all the nodes participating in the process. Assuming that the above method is used to determine link capacity, the node which can support the best overall throughput, defined either as the maximum of the minimum throughputs on all links to/from that node, or as the sum of throughputs of all links to/from the node, may be chosen as the CCo. The node is selected from the set N.
- Paragraph 0054: CCo transmits BEACON message, implying that a CCo has a communication module.
- Paragraph 0055: CCo maintains resulting TOPOLOGY_TABLE (i.e. information module) during discovery process.

Furthermore, in this case, the reference(s) teach all of the essential elements of the claim(s). It is well known in the art that when all of the essential elements of the claim(s) except integration/separation of parts are found in the reference(s), the mere unity or separation of parts is not considered to be an inventive concept. Accordingly, at the time of the invention it would have been obvious to one of ordinary skill in the arts to integrate/separate the plurality of modules within a single device, since it is well known in the art that when all of the essential elements of the claim(s) except integration/separation of parts are found in the reference(s), the mere unity/separation of parts is not considered to be an inventive concept.

Appellant argues that (page 16 paragraph 1) *Barber merely discloses that MAC defines special functional behavior for fragmentation of packets, medium reservation via RTS/CTS polling interaction (Barber, par. [0012], lines 17-20), or tunnel 1204 packages up traffic between visitor clients (Barber, par. [0103], lines 6-7), not a frame poller to provide a polling frame requesting for information of the remote node, or a frame transmitter to transmit the frame to another local node in the first network or the remote node in the second network, or a frame receiver to receive another frame from another local node in the first network or to receive a remote frame from the remote node*.

However, Examiner respectfully disagrees with Appellant's assertion. Barber indeed teaches a frame poller coupled to the frame transmitter to provide a polling frame requesting for information of the remote node (see Barber et al. paragraph 12 and figure 12 and paragraph 103 package up traffic between visitor clients); however, Ayyagari teaches *a frame transmitter to transmit the frame to another local node in the*

first network or the remote node in the second network, or a frame receiver to receive another frame from another local node in the first network or to receive a remote frame from the remote node. In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Appellant argues that (page 16 paragraph 2) *Barber does not involve requesting discovery information. Regarding the tunnel, it merely transports traffic to a firewall to allow a visitor client to access the Internet (Barber, par. [0103], lines 7-10). It does not transmit or receive a frame as recited in claims 2, 14, and 26. In fact, Barber specifically discloses that the tunnel does not send or receive traffic to or from the LAN (Barber, par. [0103], lines 10-11). Accordingly, Barber teaches away from the invention because traffic is not sent or received to or from the LAN.*

However, Examiner respectfully disagrees with Appellant's assertion. Barber was brought in to show the teachings of polling interaction; not to teach limitation related to *"involve requesting discovery information" or "transmit or receive a frame".* Ayyagari teaches the limitations related to *involve requesting discovery information" or "transmit or receive a frame".* In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231

USPQ 375 (Fed. Cir. 1986). In regards to Barber allegedly teaching away from the invention, Examiner submits that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Furthermore, "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed.." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

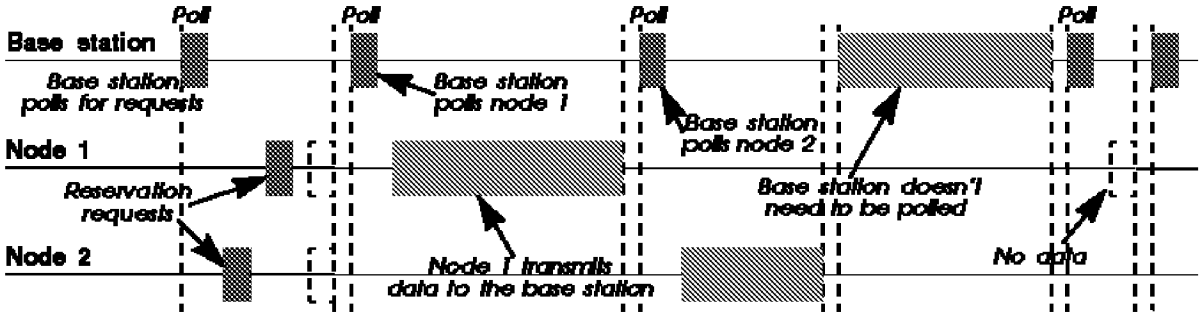
Appellant argues that (page 17 last paragraph) *Barber merely discloses RTS/CTS polling interaction and packaging up traffic between visitor clients. As discussed above, neither RTS/CTS polling interaction nor packaging up traffic between visitor clients is related to polling frame requesting for information of the remote node, or transmitting the frame to another local node in the first network or the remote node in the second network, or receiving another frame from another local node in the first network or to receive a remote frame from the remote node. Packaging traffic merely packages the traffic packets. It does not transmit or receive. Barber merely discloses transporting traffic to a firewall, but only to allow a visitor client to access the Internet, not to transmit or receive a frame. Furthermore, as discussed above, Barber specifically*

teaches "not send or receive traffic to or from the LAN." Accordingly, Barber teaches away the claimed invention.

However, Examiner respectfully disagrees with Appellant's assertion. Barber does indeed teach the "polling interaction" i.e. provide a polling frame requesting for information of the remote node. Barber clearly teaches in paragraph [0012], the 802.11 MAC defines special functional behavior for fragmentation of packets, medium reservation via RTS/CTS (request-to-send/clear-to-send) polling interaction, and point coordination (for time-bounded services). It is well known to one of ordinary skilled in the art that, “Polling” is a major channel access mechanism. The base station sends a specific packet (a poll packet) to trigger the transmission by the node. The node just wait to receive a poll packet, and upon reception sends what it has to transmit. To clarify (**and not to introduce a new ground of rejection**), Examiner presents a diagram from HP sponsored publication dated Aug 03, 2000 (below) which illustrates a well known method of “polling interaction” for 802.11 MAC protocol:

http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/Linux.Wireless.mac.html:

Polling channel Access Mechanisms :



Again, Barber was brought in to show the teachings of polling interaction; not to teach limitation related to *"transmitting the frame to another local node in the first network or the remote node in the second network, or receiving another frame from another local node in the first network or to receive a remote frame from the remote node".* Ayyagari teaches the limitations related to *transmitting the frame to another local node in the first network or the remote node in the second network, or receiving another frame from another local node in the first network or to receive a remote frame from the remote node.* In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In regards to Barber allegedly teaching away from the invention, Examiner submits that disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. In re Susi, 440 F.2d 442, 169 USPQ 423 (CCPA 1971). Furthermore, "[t]he prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed.." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). A reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill the art, including nonpreferred embodiments. Merck & Co. v. Biocraft Laboratories, 874 F.2d 804, 10 USPQ2d 1843 (Fed. Cir.), cert. denied, 493 U.S. 975 (1989).

Claims 11, 23, and 35 Are Obvious over Ayyagari and Andric and further in view of Nanda.

Appellant argues that (page 18, paragraph 3) *Nanda merely discloses a message decoder decoding one or more first interference lists from coordination messages contained in the one or more received signals from respective one or more remote devices (Nanda, paragraphs [0010], [0013]). The interference list is not included as part of the network state information*.

However Examiner respectfully disagrees with Appellant's assertion. In view of the broadest reasonable interpretation of the claim language, Ayyagari and Andric in view of Nanda do indeed teach the cited limitations. Specifically, Ayyagari and Andric do not explicitly teach network state information including an interference list. Nanda in the same field of endeavor teaches network state information including an interference list (among other paragraphs, paragraphs 0014, a message is disclosed, operable for transmission by a mesh station in a hierarchically distributed mesh network, comprising an interference list field comprising a list of interfering remote stations, a transmit allocation field comprising one or more allocations for transmission by a child remote station on a shared medium, and a receive allocation field comprising one or more allocations for receiving by a child remote station on a shared medium. Examiner has interpreted interference list field + transmit allocation field + receive allocation field together to be the "network state information" and "interference list" being included in the said "network state information".

Appellant cites various case laws in pages 18-20 and argues *that the Examiner failed to establish a prima facie case of obviousness and failed to show there is teaching, suggestion, or motivation to combine the references; failed to establish the factual inquires in the three-pronged test as required by the Graham factual inquires. There are significant differences between the cited references and the claimed invention as discussed above. Furthermore, the Examiner has not made an explicit analysis on the apparent reason to combine the known elements in the fashion in the claimed invention. Accordingly, there is no apparent reason to combine the teachings of Ayyagari, Andric, Barber and Nanda in any combination*.

Examiner respectfully submits that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the Appellant's disclosure, such a reconstruction is proper. See In re McLaughlin, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Examiner respectfully submits in response to Appellant's argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In regards to Appellant's argument that, the alleged motivation advanced by the Office Action appears to be purely subjective reasoning supported only by a conclusory statement by the Examiner, Examiner respectfully submits that the following are some rationales which may be used when formulating a 103 rejection:

(1) Combining prior art elements according to known methods to yield predictable results.

(2) Simple substitution of one known element for another to obtain predictable results.

(3) Use of known techniques to improve similar devices (methods or products) in the same way.

(4) Applying a known technique to a known device (method or product) ready for improvement to yield predictable results

(5) "Obvious to try" - choosing from a finite number of identified, predictable solutions.

(6) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

(7) The TSM test. (Although the Supreme Court cautioned against an overly rigid application of TSM, it also recognized that TSM was one of a number of valid rationales that could be used to determine obviousness)

Examiner, finally, respectfully submits that the cited motivation among other criteria, clearly meets the rationale that known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces/market place incentives if the variations are predictable to one of ordinary skill in the art.

As such, Examiner respectfully disagrees with Appellant's assertion that there is no apparent reason to combine the teachings of Ayyagari, Andric, Barber and Nanda in any combination.

Conclusion: Examiner has clearly shown that all the limitation of the cited claims are indeed taught by the cited prior art. For the above reasons, Honorable Board, it is believed that the rejections should be sustained.

(11) Related Proceedings Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, Honorable Board, it is believed that the rejections should be sustained.

Respectfully submitted,

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